

# FISCAL YEAR 2000 DISASTER ACTIVITY OVERVIEW



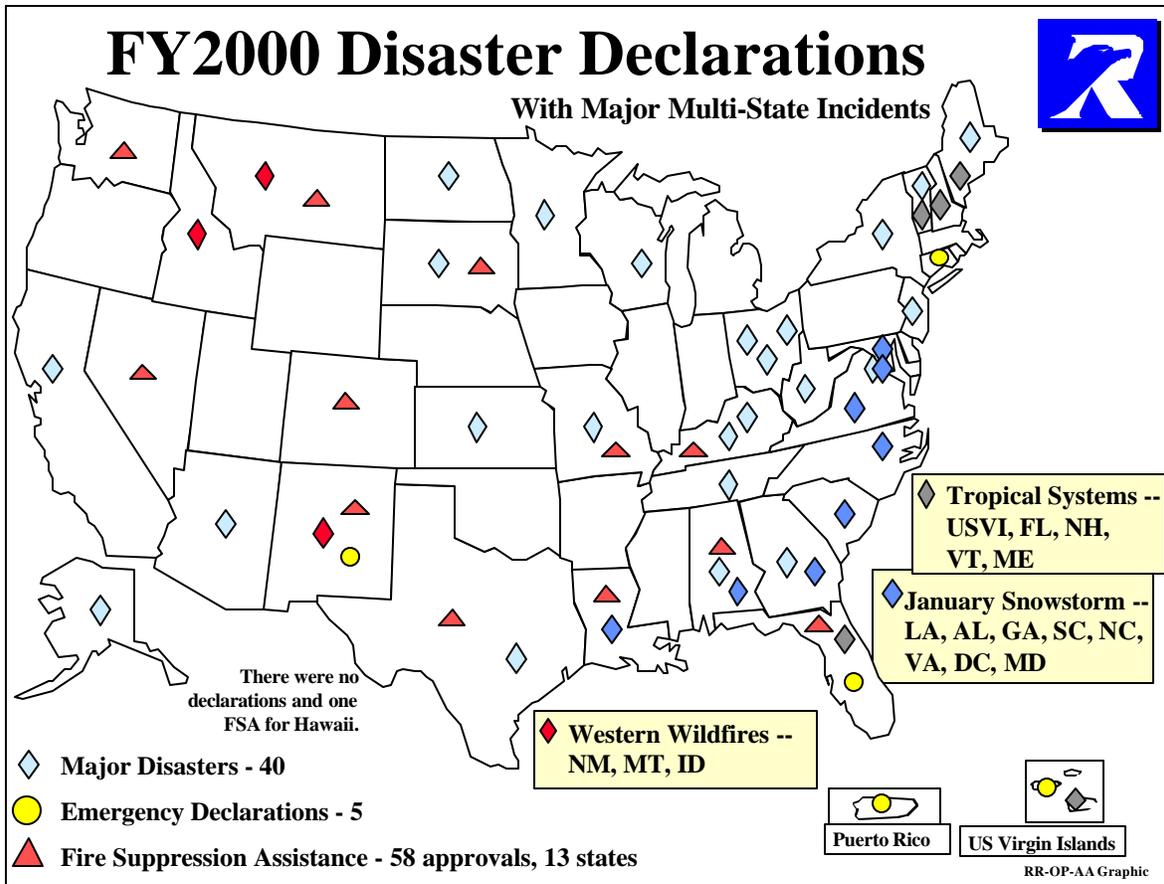
December 1, 2000

## FY2000 DISASTER ACTIVITY OVERVIEW

Despite the hurdles of the Y2K bug, a busier than average hurricane season and drought and severe wildfire conditions across much of the western U.S., Fiscal Year 2000 (FY2000) saw fewer and smaller major disaster declarations than in recent years. FY2000, which ran from October 1, 1999 through September 30, 2000 involved 40 major disaster declarations, five emergency declarations and 58 Fire Suppression Assistance (FSA's) grants in 13 states.

This compares with previous years according to the following table:

| YEAR | Major Disaster Declarations | Emergency Declarations | FSA's | FSA States |
|------|-----------------------------|------------------------|-------|------------|
| 2000 | 40                          | 5                      | 58    | 13         |
| 1999 | 52                          | 16                     | NA    | 7          |
| 1998 | 61                          | 9                      | 53    | 7          |
| 1997 | 49                          | NA                     | NA    | NA         |
| 1996 | 72                          | NA                     | NA    | 10         |



FY 2000 started with a declaration, FEMA-1304-DR, Arizona for severe storms that hit the state in mid-September 1999. There were then a series of declarations signed for the effect of Hurricane Floyd and its remnants in New England, FEMA-1305-DR, New Hampshire, FEMA-1307-DR, Vermont and FEMA-1308-DR, Maine. In the mean time, two declarations were signed for other tropical systems that made landfall during the 1999 hurricane season, FEMA-1306-DR, Florida for Hurricane Irene and FEMA-1309-DR, U.S. Virgin Islands for Hurricane Lenny. This declaration, signed on November 23, 1999, was the last of that calendar year. The next series of declarations came with the winter storm of late January, 2000.

### **EASTERN WINTER STORM**

In late January, 2000 a severe winter storm developed over the southern plains and moved slowly to the east, drawing moisture initially from the Gulf of Mexico and eventually from the Atlantic Ocean. The storm affected states from the Gulf Coast to the Mid-Atlantic with several days of snow, ice and gusty winds. Eight major disaster declarations were signed for this incident, the only major multi-state event of the year. Declarations were signed for Georgia (FEMA-1311-DR), North Carolina (FEMA-1312-DR), South Carolina (FEMA-1313-DR), Louisiana (FEMA-1314-DR), Alabama (FEMA-1317-DR), Virginia (FEMA-1318-DR), Maryland (FEMA-1324-DR) and the District of Columbia (FEMA-1325-DR) for this incident. These were all Public Assistance disasters only.

### **SEVERE STORMS**

The bulk of declarations for the year resulted from isolated outbreaks of severe weather, according to the following table:

| <b>INCIDENT TYPE</b>                                 | <b>TOTAL DECLARATIONS</b> | <b>AFFECTED STATES</b>   |
|--|---------------------------|--|
| Severe Storms (some including flooding or tornadoes) | 19                        | AZ, KY, GA, WV, OH, AL, TX, ME, KS, MO, TN, WI, MN, ND, NY, NJ, DC |
| Severe Winter Storm                                  | 9                         | LA, AL, GA, SC, NC, VA, DC, MD, SD                                 |
| Tropical Systems                                     | 5                         | USVI, FL, VT, NH, ME   |
| Wildfires  | 3                         | NM, MT, ID   |
| Flash Flooding                                       | 1                         | VT   |
| Avalanche  | 1                         | AK   |
| Earthquake   | 1                         | CA   |

### **WILDLAND FIRE SEASON OVERVIEW**

A natural hazard that struck with particular ferocity this year was the wildfire outbreak that burned on hundreds of thousands of acres across the West. Although dramatic, all of these except the one that destroyed several hundred homes in Los Alamos, NM burned on very sparsely populated areas in Montana and Idaho. Three major disaster declarations did result from these fires, however, one each in New Mexico, Montana and Idaho.

Cold water in the Pacific Ocean has been affecting weather across the United States for the past two years. This weather pattern, called “La Nina,” was at its strongest in the late winter/early spring of 2000. The effect was a wet winter in the northwestern United States and dry conditions along the southern tier of the country from California to Florida.

For example, southern California reported about half its normal precipitation, and the Southwest experienced its second consecutive dry winter. In addition, several southern states reported severe drought conditions. As a result of La Nina and its influence on weather patterns, a combination of dry fuels and dry, hot weather led to what some are declaring one of the most severe wildland fire seasons in U.S. history.



The absence of the seasonal monsoons in the Southwest, the dry vegetation and record-low fuel moisture, and the persistently hot weather across much of the West, culminated in a wildland fire season that began early, became intense and widespread, and lasted for an unusually long period of time.

Fire activity began in mid-February with large grass fires in New Mexico. Fire activity moved then eastward and northward into Virginia. By the end of February, fires were reported in Texas, Louisiana, and Missouri. A month later several fires were burning in Oklahoma, and the year’s first Type 1 team from the National Interagency Fire Center (NIFC) was assigned to a fire on the Kisatchie National Forest in Louisiana. Additional large fires were reported in Georgia, Florida, Alabama, Missouri, Ohio, Minnesota and Indiana.

In April, Type 1 incident command teams managed California's wind-driven Cabbage fire on the Mendocino National Forest, and the Coon Creek fire on the Tonto National Forest in Arizona. There were also large fires in Minnesota, Wisconsin, Mississippi, New Mexico, Missouri, Kentucky, Florida, Colorado, North Carolina and North Dakota.

The season began in earnest, however, with an escaped prescribed fire on the Bandelier National Monument near Los Alamos, New Mexico. Attempting to reduce thick brush, fire personnel ignited a fire on May 4 that was driven by erratic winds across control lines. By the time the fire was controlled weeks later, 235 homes in the town of Los Alamos had been destroyed and 47,650 acres of land had been scorched. Hundreds of firefighters helped suppress the fire, and in the following weeks, rehabilitate the burned hillsides.

At the same time, the western U.S. from Canada to Mexico continued to experience warm and dry, and then hot and continued dry weather. Fuel moisture in the vegetation dropped to unusually low levels. Drought conditions were reported in several states including Arizona, New Mexico, southern California, and portions of Nevada, Idaho, Utah, western Wyoming and Montana.

Very high to extreme fire danger indices were reported in nearly every western state. Conditions were extreme. What happened next was not surprising. Waves of thunderstorms began steadily rocking the West, and fires started popping in Nevada, Idaho, Colorado, Wyoming and Montana. Weather systems spun off winds that only exacerbated the situation, and by July 15 the National Interagency Fire Center's (NIFC's) national preparedness level was raised to a three in response to the several large wildland fires burning in the West.

By July 24, nine of the 11 geographic areas, including 11 western states and Texas, were managing many large fires, and competing for crews of firefighters, aircraft, equipment, supplies, and overhead personnel. Dozens of new fires were being reported every day, while crews were struggling to contain those underway. Long-term weather forecasts showed no relief. On July 26, all eight C-130 Modular Airborne Firefighting Systems aircraft were activated to help suppress the fires.

On July 28, NIFC declared a planning level of five – the highest possible – and began implementing strategies to address the serious situation. Meanwhile, more than 20,000 firefighters, mostly civilians, were either working to contain large project fires or extinguish new starts with initial attack.

Federal fire resources, from crews to aircraft to overhead personnel, were stretched to the limit when military assistance was requested in late July. Within a week of the request, 500 Army troops reinforced civilian firefighters battling a large, stubborn blaze in central Idaho. A few days later an additional 500 Marines bolstered forces on the largest fire in the nation—also located in the central mountains of Idaho -- called the Clear Creek fire.

Fire managers had also requested assistance from their international partners, including Canada, Australia, New Zealand and Mexico. Canada quickly sent three airtankers that were assigned to fires in Montana. A firefighting crew from Mexico, trained by the Big Bend National Park in Texas, was assigned to the Peak fire in Arizona on August 4.

Still, every day dozens of new or holdover large wildland fires were being reported. Initial attack forces were scrambling to respond to hundreds of new fires sparked by dry lightning pummeling western states. Most of the new starts were unstaffed as managers struggled to protect entire communities and hundreds of homes threatened by fires in Montana, Idaho, and several other western states.

Multi-agency coordinating groups were establishing protection and suppression priorities in the Great Basin and Northern Rockies for fires in Idaho, Utah, Nevada and Montana. Two area command teams were set up in Montana, and two more were added by the end of the month to manage the state's many large fires. All of the 16 Type 1 incident command teams were assigned to fires and all 70 of the Type 1 crews were committed as well as most of the 409 smokejumpers. Of the 428 Type 2 crews, about 15 would become available each day only to be reassigned to high priority fires. In addition to federal resources, many states were supporting efforts with military reserve and National Guard personnel.

The situation had become extreme. Because of the extraordinarily dry fuels, hot and dry weather, and gusty winds many areas were experiencing, some of the fires were among the very toughest to fight in the last 50 years. The situation called for extreme measures. With firefighting resources stretched to the limit and no relief in sight from the weather, fire directors from the land management agencies adopted a slight shift in wildland fire management policy.

The strategy dictated protection of human life as the first priority and that would not change. However, because of the critical situation, the second priority was shifted from protection of property and natural resources to initial attack. New fire starts had to be extinguished while they were small because large, project fires would drain resources. This meant that firefighting resources could be moved from existing large fires to ensure that new starts were extinguished rapidly.

The third priority became protection of communities – population centers and critical natural resources such as water supplies, infrastructure and utilities. Because there were so many fires, managers would have to make difficult choices regarding allocation of limited resources. At those times, they looked carefully at the possible long-term consequences of different choices and made decisions based on the best interest of the entire community. This meant, in some cases, that individual structures, especially in isolated locations, could not be protected.

By the end of August, two more military battalions, and more than 550 Canadian firefighters, plus firefighters from Australia and New Zealand, were supporting fires in Montana and elsewhere. All told, more than 30,000 people, including civilian

firefighters, state personnel, National Guard, Army, Marines, rural fire department personnel, and people from countries outside the United States were on firelines or filling overhead positions.

Until the end of August, fire activity and the country's attention had been focused mostly on Idaho and Montana where more than half the fires were burning. However, as August rolled into September, three things happened. First, the number of active fires peaked at 86. Second, fire activity increased dramatically in the southern area; and third, the relentlessly hot and dry weather eased in the northwest bringing cooler temperatures, higher humidity, and longed-for rain showers over the central mountains of Idaho and across some of the fires in Montana.

Almost overnight, firefighters began gaining ground. The threats to communities from the fires diminished in the northwest as each day dawned cooler and with the promise of more moisture. As fire after fire was extinguished, crews and support personnel became available once again, and foreign support and military battalions began demobilizing. On September 6, national fire managers dropped the preparedness level to four.

As September coasted into October, throughout the West, and especially on the two largest fires of the season, the Valley Complex in Montana and the Clear Creek Complex in Idaho, firefighters continued to douse hot spots, but the emphasis turned to rehabilitation of the charred land and protection of watersheds. Southern and Southwestern states were still receiving new starts, because of the area's continued hot and dry weather, though most of those fires were contained within two or three days. By October 10, only one large fire was reported on the national incident situation report, and that one was near containment.

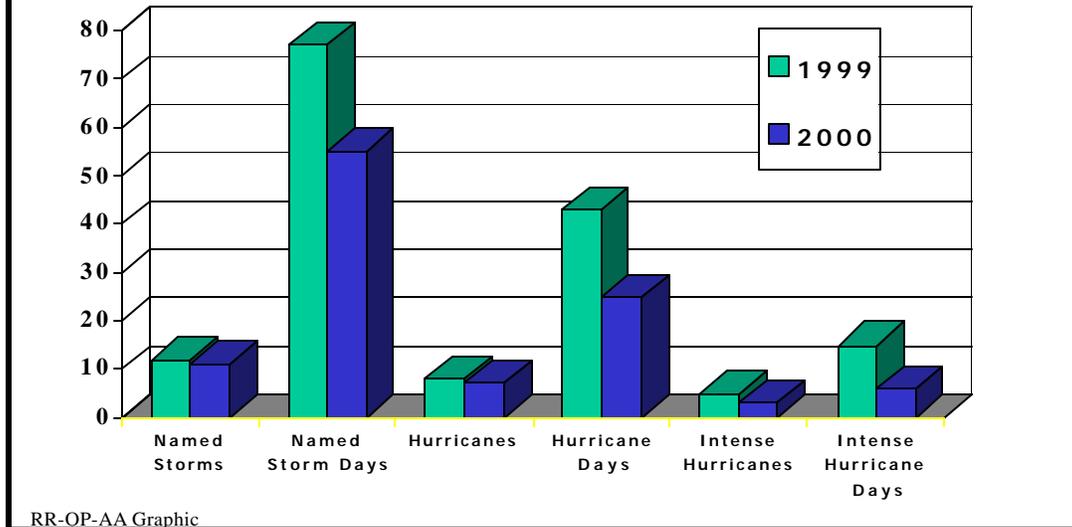
As of October 21, a total of 84,960 wildland fires have burned 6,966,995 acres across the United States since January 2000. The ten-year average (taken from 1990-1999 totals) for numbers of fires is 106,393 and for acres burned is 3,786,411. Total fire suppression cost to October 12 is an estimated \$877,847,296, and a total of 852 structures have been destroyed nationwide.

Along with the three major disaster declarations for New Mexico (FEMA-1329-DR), Montana (FEMA-1340-DR) and Idaho (FEMA-1341-DR), FEMA provided assistance through 58 Fire Suppression Assistance grants for 13 different states. (*NIFC*)

## **BUSY 2000 HURRICANE SEASON LOW ON IMPACT**

The 2000 Hurricane Season comes to a whimpering end with only two named tropical storms making landfall on U.S. territory. This was the first year since 1994 that a hurricane has not made landfall in the U.S. or its concerns.

# A comparison of seasons



The season itself was quite active with 14 named storms, eight hurricanes, three of which were of Category 3 or higher. The long-term averages are 9.3 named storms, 5.8 hurricanes with 2.2 of these at Category 3 or greater.

Only one of these storms this season, Tropical Storm Helene, prompted a major disaster declaration in northern Florida. FEMA-1344-DR, Florida was declared on October 3 after the storm made landfall on September 22 slightly west of Walton Beach, FL. Following closely on the heels of Tropical Storm Gordon the week before, Helene caused flooding from 10 inches of rain. All-in-all, nine counties: Bay, Calhoun, Escambia, Franklin, Gulf, Jefferson, Leon, Okaloosa and Wakulla, were declared eligible for Public Assistance.

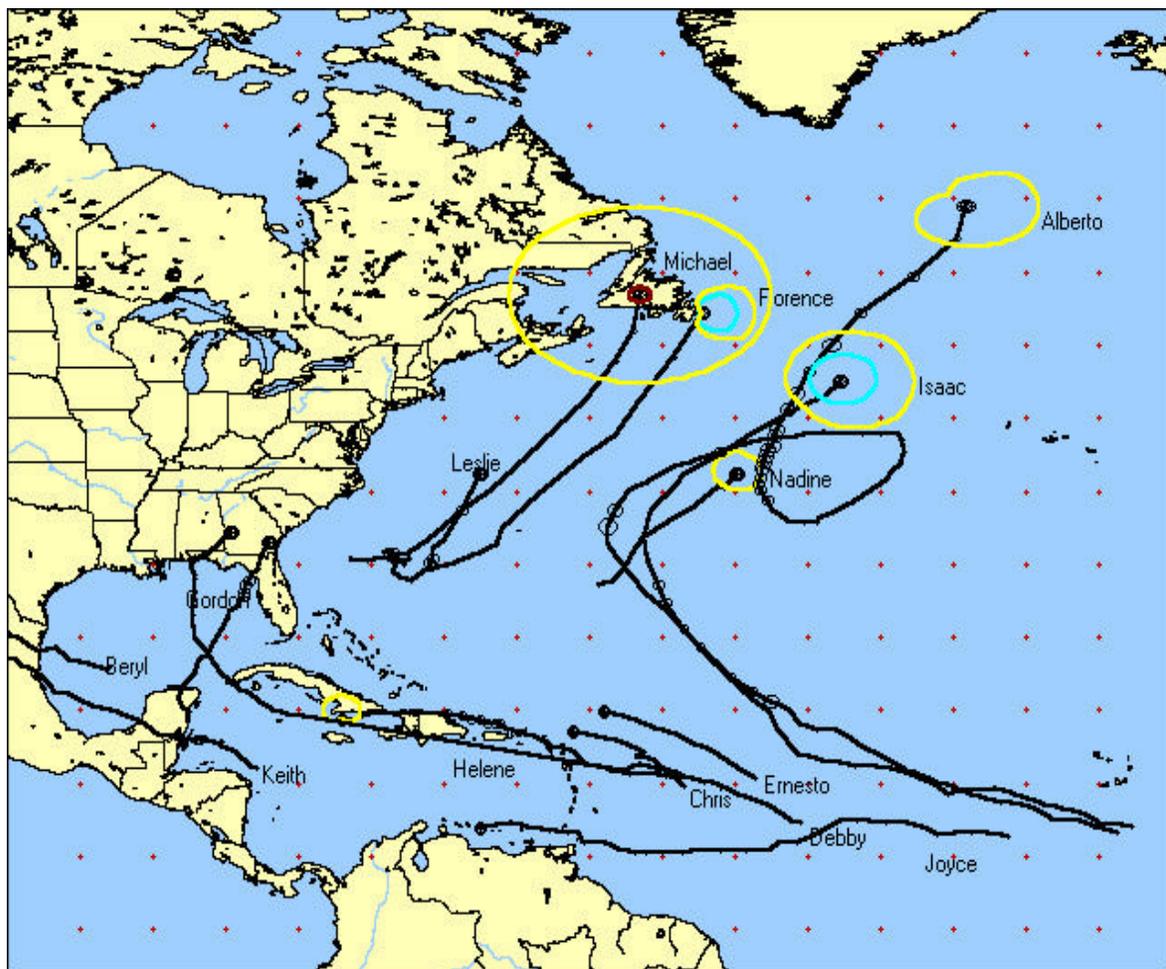
A month later, a strong low-pressure system off the West Coast of Florida brought a second major disaster declaration to Florida before eventually becoming Tropical Storm Leslie in the western Atlantic. FEMA-1345-DR, was declared on October 4, for Florida. The system brought heavy rain and flooding to southern portions of the state between October 3 through 11. Broward and Miami-Dade counties were declared eligible for both Individual and Public Assistance while Collier and Monroe counties were declared eligible for Individual Assistance.

A third storm, Tropical Storm Beryl, made landfall on northeastern Mexico during the early morning hours of August 14 bringing much needed rain to southern Texas.

The balance of the 2000 Hurricane Season saw numerous storms form in the Atlantic or Caribbean only to fade away before threatening US interests. According to Dr. William Gray, a noted long-range hurricane forecaster, the season saw 32 hurricane days with 5.25 of those being intense hurricane days. He had predicted a 72 percent chance that a Category 3 or higher storm would make landfall somewhere along the US coastline this year.

Looking at the standards of the last century, Gray said that the US should have seen seven to eight major landfall events since 1995. "We've been lucky," he said, "but that luck will not hold." According to Gray, the long-term climatology is eventually going to manifest itself over the coming decades bringing much greater damage than the US has ever seen. (FEMA HQ, National Hurricane Center, Colorado State University)

### 2000 Atlantic Season Storm Tracks



RR-OP-AA Graphic